

## IN THE CLAIMS

Please amend the claims to read as follows:

### Listing of Claims

1-41. (Canceled).

42. (Previously Presented) A data transmission method for use in a mobile communication system, the method comprising:

establishing radio bearers between a mobile terminal and a radio access network of the mobile communication system,

receiving, at the mobile terminal, radio bearer mapping information from the radio access network, wherein the radio bearer mapping information indicates for each of the radio bearers:

(1) a priority to be assigned to a logical channel to which the respective radio bearer is to be mapped and (2) a scheduling mode out of plural scheduling modes of the logical channel to which the respective radio bearer is to be mapped,

mapping the radio bearers to logical channels at the mobile terminal taking into account the received radio bearer mapping information, wherein mapping the radio bearers to logical channels comprises assigning to a logical channel on which a respective radio bearer is mapped the priority and the scheduling mode indicated in the radio bearer mapping information,

multiplexing data of the logical channels to a single transport channel, and

transmitting by the mobile terminal the multiplexed data of the logical channels on the transport channel.

43. (Previously Presented) The data transmission method according to claim 42, further comprising selecting by the mobile terminal a transport format combination to be used for transmitting multiplexed data based on at least the priority assigned to the logical channel.

44. (Canceled).

45. (Previously Presented) The data transmission method according to claim 43, wherein the multiplexed data is transmitted using the selected transport format combination.

46. (Previously Presented) The data transmission method according to claim 42, further comprising multiplexing data of the logical channels to the transport channel based on the scheduling mode of a respective logical channel and the priority assigned to a respective logical channel.

47. (Previously Presented) The data transmission method according to claim 42, further comprising receiving, at the mobile terminal, the radio bearer mapping information as part of Radio Resource Control (RRC) signaling information from the radio access network.

48. (Canceled).

49. (Previously Presented) The data transmission method according to claim 42, wherein the data is transmitted on an enhanced dedicated uplink channel.

50. (Canceled).

51. (Previously Presented) The data transmission method according to claim 42, wherein the scheduling mode is either a time and rate controlled scheduling mode or a rate controlled scheduling mode.

52. (Canceled).

53. (Previously Presented) A mobile terminal for use in a mobile communication system, the mobile terminal comprising:

a processing unit that establishes radio bearers between the mobile terminal and a radio access network,

a receiving unit that receives, from the radio access network of the mobile communication system, radio bearer mapping information indicating for each of the radio bearers: (1) a priority assigned to a logical channel that is mapped on a transport channel and (2) a scheduling mode out of plural scheduling modes of the logical channel,

a mapping unit that maps the radio bearer to the logical channels taking into account the received radio bearer mapping information, wherein said mapping unit is operable to assign to a

logical channel on which a respective radio bearer is mapped the priority and the scheduling mode indicated in the radio bearer mapping information,

a multiplexer that multiplexes data of the logical channels to a single transport channel,  
and

a transmitting unit that transmits the multiplexed data of the logical channels on the transport channel.

54. (Previously Presented) The mobile terminal according to claim 53, further comprising a selecting unit that selects a transport format combination to be used for transmitting multiplexed data based on at least the priority assigned to the logical channels.

55. (Canceled).

56. (Previously Presented) The mobile terminal according to claim 54, wherein the transmitting unit transmits the multiplexed data using the selected transport format combination.

57. (Previously Presented) The mobile terminal according to claim 53, wherein the multiplexer is operable to multiplex data of the logical channels to the transport channel based on the scheduling mode of a respective logical channel and the priority assigned to a respective logical channel.

58. (Previously Presented) The mobile terminal according to claim 53, wherein the receiving unit receives the radio mapping information as part of Radio Resource Control (RRC) signaling information from the radio access network.

59. (Canceled).

60. (Previously Presented) The mobile terminal according to claim 53, wherein the transmitting unit transmits the multiplexed data on an enhanced dedicated uplink channel.

61. (Canceled).

62. (Previously Presented) The mobile terminal according to claim 53, wherein the scheduling mode is either a time and rate controlled scheduling mode or a rate controlled scheduling mode.

63. (Previously Presented) A computer readable medium storing instructions that, when executed by a processor of a mobile terminal, cause the mobile terminal to perform data transmissions, by:

establishing radio bearers between a mobile terminal and a radio access network of a mobile communication system,

receiving, at the mobile terminal, radio bearer mapping information from the radio access network, wherein the radio bearer mapping information indicates for each of the radio bearers:

(1) a priority to be assigned to a logical channel to which the respective radio bearer is to be mapped and (2) a scheduling mode out of plural scheduling modes of the logical channel to which the respective radio bearer is to be mapped,

mapping the radio bearers to logical channels at the mobile terminal taking into account the received radio bearer mapping information, wherein mapping the radio bearers to logical channels comprises assigning to a logical channel on which a respective radio bearer is mapped the priority and the scheduling mode indicated in the radio bearer mapping information,

multiplexing data of the logical channels to a single transport channel, and

transmitting by the mobile terminal the multiplexed data of the logical channels on the transport channel.

64-67. (Canceled).

68. (Previously Presented) A data transmission method for use in a mobile communication system, the method comprising:

establishing radio bearers between a mobile terminal and a radio access network of the mobile communication system;

receiving at the mobile terminal radio bearer mapping information from the radio access network, wherein the radio bearer mapping information indicates for each of the radio bearers (1) a priority to be assigned to a logical channel to which the respective radio bearer is to be mapped and (2) a scheduling mode out of plural scheduling modes of the logical channel to which the respective radio bearer is to be mapped;

mapping the radio bearers to logical channels at the mobile terminal taking into account the received radio bearer mapping information, wherein mapping the radio bearers to logical channels comprises assigning to a logical channel on which a respective radio bearer is mapped the priority and the scheduling mode indicated in the radio bearer mapping information;

multiplexing data of the logical channels to a single transport channel based on the scheduling mode of a respective logical channel and the priority assigned to a respective logical channel;

selecting by the mobile terminal a transport format combination to be used for transmitting the multiplexed data based on at least the priority assigned to the logical channels; and

transmitting by the mobile terminal the multiplexed data of the logical channels on the transport channel.

69. (Previously Presented) A mobile terminal for use in a mobile communication system, the mobile terminal comprising:

a processing unit that establishes radio bearers between a mobile terminal and a radio access network of the mobile communication system;

a receiving unit that receives at the mobile terminal radio bearer mapping information from the radio access network, wherein the radio bearer mapping information indicates for each of the radio bearers (1) a priority to be assigned to a logical channel to which the respective radio bearer is to be mapped and (2) a scheduling mode out of plural scheduling modes of the logical channel to which the respective radio bearer is to be mapped;

a mapping unit that maps the radio bearers to logical channels at the mobile terminal taking into account the received radio bearer mapping information, wherein mapping the radio bearers to logical channels comprises assigning to a logical channel on which a respective radio bearer is mapped the priority and the scheduling mode indicated in the radio bearer mapping information;

a multiplexer that multiplexing multiplexes data of the logical channels to a single transport channel based on the scheduling mode of a respective logical channel and the priority assigned to a respective logical channel;

a selection unit that selects ~~selecting by the mobile terminal~~ a transport format combination to be used for transmitting the multiplexed data based on at least the priority assigned to the logical channels, and

a transmission unit that transmits ~~transmitting by the mobile terminal~~ the multiplexed data of the logical channels on the transport channel.

70. (New) The data transmission method according to claim 42, wherein data of all of the logical channels are multiplexed to said single transport channel.

71. (New) The mobile terminal according to claim 53, wherein the multiplexer multiplexes data of all of the logical channels to said single transport channel.

72. (New) The computer readable medium according to claim 63, wherein data of all of the logical channels are mapped to said single transport channel.



73. (New) The data transmission method according to claim 68, wherein data of all of the logical channels are multiplexed to said single transport channel.

74. (New) The mobile terminal according to claim 69, wherein the multiplexer multiplexes data of all of the logical channels to said single transport channel.